

# INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS PROGRESS REPORT TO THE PUBLIC



*“My vision for a renewed Indianapolis landscape starts with the basics expected by residents of their government. This doesn’t mean we don’t embrace our past accomplishments, but rather we build on them. It is a vision of a more sustainable, more livable city that prospers with the aid of – and without the interference of – the political structure. It is a vision for not accepting anything less than the best we can do for every neighborhood.”*

— Mayor Greg Ballard



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# LETTER FROM THE MAYOR

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Indianapolis has come a long way in 3½ years, and the Department of Public Works (DPW) played a key role in the community's transformation. DPW contributed significantly to improve the quality of life for residents of our great City with respect to land, water and air. Today, my hope is that this progress report to the public provides citizens with a brief overview of DPW's accomplishments and a few snapshots illustrating DPW's strong commitment to the Indianapolis community.

In 2009 and 2010, DPW partnered with the U.S. Environmental Protection Agency (EPA) and the Indiana Department of Environmental Management (IDEM) to achieve lasting environmental and economic benefits for our community. After extensive discussions and a transparent public comment period, Indianapolis and EPA reached a consensus with regard to modifications to the City's Combined Sewer Overflow (CSO) Consent Decree (CD). The CD modifications will result in \$740 million in taxpayer savings and provide cleaner waterways more quickly than originally planned.

On May 11, 2010, DPW Director David Sherman and I joined community leaders to launch RebuildIndy –one of the largest investments in public infrastructure in the City's history. RebuildIndy is restoring deteriorating thoroughfares, residential streets, sidewalks and bridges, as well as addressing unsalvageable homes that pose a public safety threat to neighborhoods. The initiative is not only creating needed jobs but also establishing a foundation for increased economic development opportunities in Indianapolis.

Most recently, on August 26, 2011, the City of Indianapolis and Citizens Energy Group completed the transfer of the community's water and wastewater utilities to Citizens. The transfer came after approval by the Indiana Utility Regulatory Commission and the City-County Council of Indianapolis and Marion County. The transfer has infused \$425 million into the Rebuild Indy initiative, and in the long-term, these funds will support the goal of making Indianapolis a more livable city.

Since I created the Office of Sustainability in 2008, it has taken bold and innovative steps to affect lasting, environmental and economic vitality. Staff members continue to approach sustainability from a public-private partnership perspective, which is a principal on which the office was founded. We are making progress as we set and achieve measurable objectives to reach milestones and meet nationally and internationally recognized standards. In time, our green initiatives will produce long-term rewards to the citizens and position Indianapolis as one of the most sustainable cities in the United States.

In 2011 and beyond, I look forward to the continued contributions of DPW and every Indianapolis citizen to this great City, where people enjoy living, working and raising their families.

Sincerely,

A handwritten signature in dark ink, reading "Gregory A. Ballard". The signature is fluid and cursive, with the first name "Gregory" being more prominent.

Gregory A. Ballard  
Mayor, City of Indianapolis



Mayor Greg Ballard announced the Deep Rock Tunnel Connector Project on May 9, 2011.



Gathered with the nation's city leaders at the U.S. Conference of Mayors Water Summit, Mayor Ballard offered his perspective on Indianapolis' Consent Decree Enhancement Plan, the water and wastewater utilities transfer, RebuildIndy infrastructure improvements and SustainIndy programs.



*Public Works magazine featured the City of Indianapolis in its October 2011 cover story "Getting to 'Yes:' How to Modify a Consent Agreement EPA and the Justice Department Can't Refuse." Last year, Indianapolis became the first city in the nation to successfully modify its CSO Consent Decree to increase environmental benefits for less cost.*

## *Purpose of this Report*

The Indianapolis Department of Public Works (DPW) has published this Progress Report to the Public with the intent of providing Indianapolis residents with a snapshot of the department's progress since 2008. The report summarizes DPW's achievements in the areas of capital improvement planning and implementation, infrastructure operations and maintenance, environmentally responsible practices, customer service, community involvement and economic growth. This document also satisfies the public reporting requirement for the required Combined Sewer Overflow (CSO) Consent Decree from 2008 to the date it was published. Citizens Water assumed responsibility for implementation of the CSO Consent Decree on Aug. 26, 2011.

# CONSENT DECREE AND LONG TERM CONTROL PLAN

*In 2008, Mayor Gregory A. Ballard and DPW Director David Sherman got to work confronting the City's greatest challenges. They first focused their attention on one of the most significant tests during Mayor Ballard's term – to achieve lasting environmental, economic and community vitality with regard to the City's required Combined Sewer Overflow (CSO) Consent Decree (CD).*

Today, Mayor Ballard's goal to preserve and improve the environment has prevailed. The mayor and Director Sherman have accomplished what seemed insurmountable in 2008. They successfully negotiated two amendments to the City's CSO Consent Decree that will not only provide cleaner waterways faster than originally planned but also save Indianapolis residents hundreds of millions of dollars.

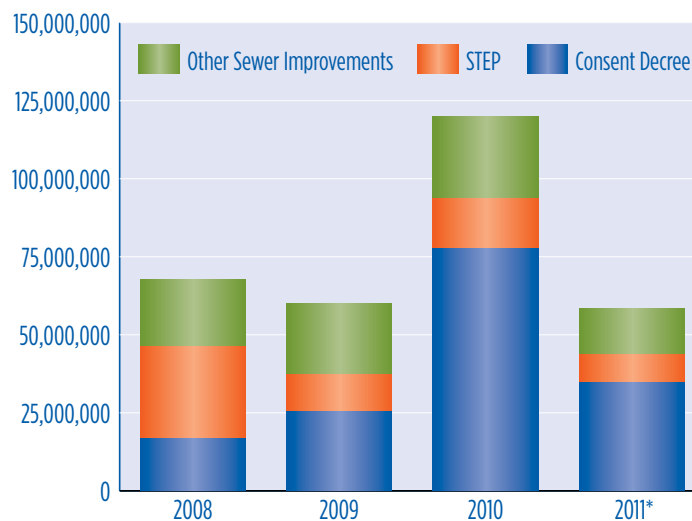
Referred to as the Enhancement Plan, the CD amendments will allow Indianapolis to divert 3.5 billion gallons of sewage from polluting local waterways ahead of the original schedule and provide a more integrated citywide tunnel system. The modifications will also save Indianapolis residents \$740 million by incorporating more cost-effective, environmentally beneficial projects. The amendments modified 14 of the City's 31 CD control measures, added a new control measure, provided new projects and addressed project scheduling and operations to capture raw sewage overflows more quickly.

The Enhancement Plan was developed following a closer examination of Indianapolis' sanitary sewer capital program. Director Sherman initiated an aggressive value engineering plan to address escalating construction and design cost overruns of approximately \$300 million related to Indianapolis' CD and 20-year, \$1.7 billion CSO Long Term Control Plan. As part of the process, he also engaged his team in more detailed modeling of the sewer system and additional studies in an effort to fully optimize the City's CD from both a financial and sustainable perspective.

The Environmental Protection Agency (EPA) and U.S. Department of Justice (DOJ) approved the City's amended CD during the summer of 2010. The amendments brought the CSO Long Term Control Plan back into scope, while still meeting the high levels of performance criteria that were identified in the initial CD requirements. The Consent Decree requires that, by 2025, the City capture and treat 97 percent of the sewage overflows in the Fall Creek watershed and 95 percent in the White River

and other watersheds in a typical year. By 2025, overflows will be allowed to occur during only two storms per year on Fall Creek and four storms per year on White River and other waterways in a typical year.

## SANITARY SEWER INVESTMENTS



\* 2011 includes investments from Jan. 1 to Aug. 5, 2011.

***“Only under unique circumstances would we modify the terms of a settlement. The proposed modifications will benefit the environment and reduce costs for the city of Indianapolis. In my view, this is a classic ‘win-win.’”***

— Ignacia S. Moreno, assistant attorney general, Environment and Natural Resources Division, U.S. Department of Justice

To help meet these requirements, DPW will design and construct a citywide tunnel system comprised of five tunnels: the Deep Rock Tunnel Connector, Fall Creek Tunnel, White River Tunnel, Pleasant Run Tunnel and Lower Pogues Run Tunnel. The tunnel system will have a storage capacity of 250 million gallons and will significantly reduce raw sewage overflows during large storm events. The tunnel system will address CSO locations throughout Indianapolis by serving as a comprehensive, underground storage facility for sewage.

As part of the Enhancement Plan, Indianapolis will also invest \$63.3 million to complete four additional projects, which will provide even greater benefits to the local environment. The Belmont North Relief Interceptor will increase sanitary sewer capacity on the northwest side of Indianapolis, and three other projects will improve the operational efficiency of the City's wastewater treatment plants.



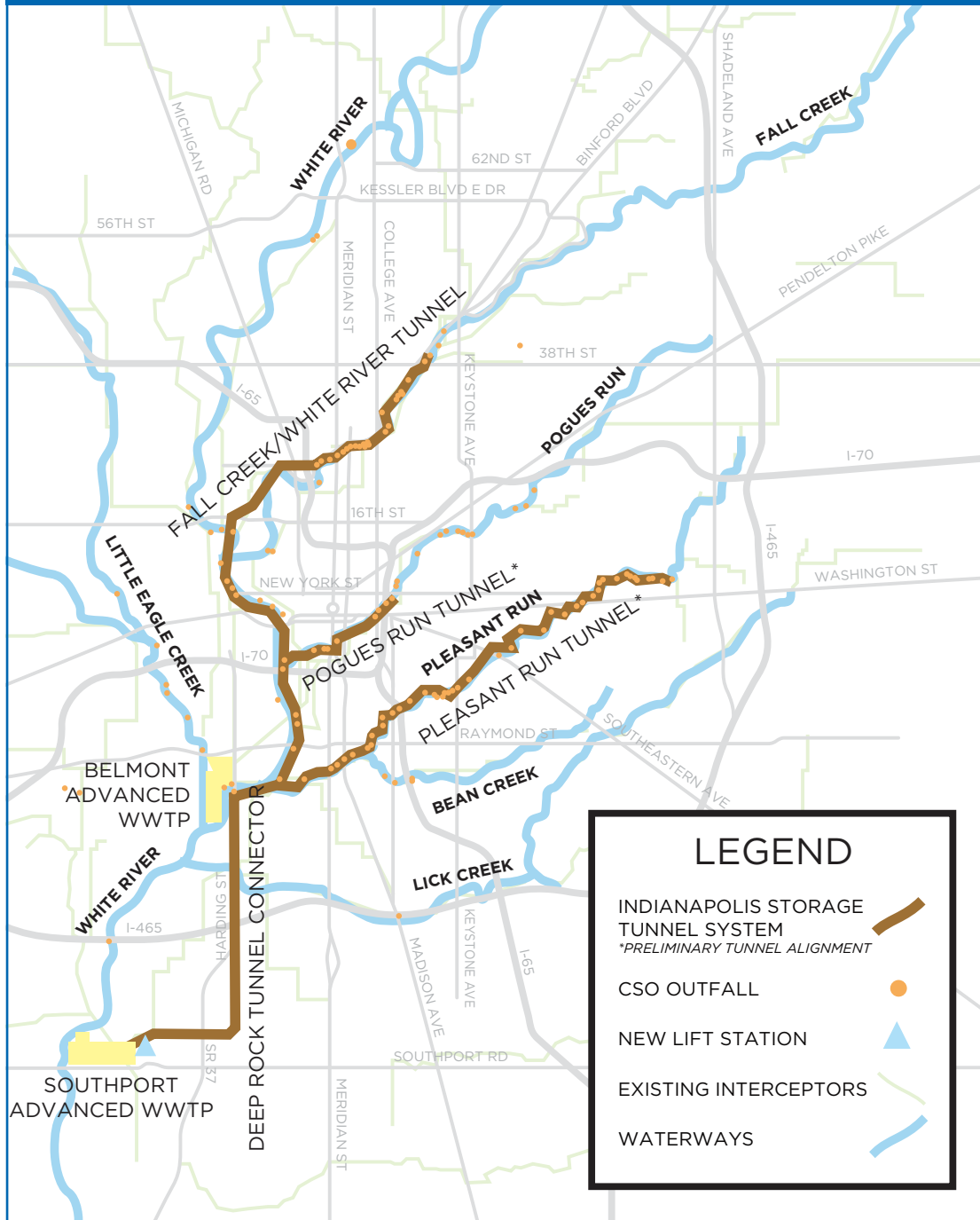
*Indianapolis' citywide tunnel system will address CSO locations throughout Indianapolis by serving as a comprehensive, underground storage facility for sewage.*  
*Photo courtesy City of Milwaukee*

### CONSENT DECREE/LONG TERM CONTROL PLAN PROGRESS

CD Control Measure	Structure Addressed	DPW Project(s)	Completion
19	CSO 143	Pogues Run Sewer Separation and Drainage Improvements	Anticipated 2012
29	CSOs 017	CSO 017 Elimination	2025
13	CSO 155	Rerouting overflows on Upper White River to Lift Station 507	2010
14	CSO 205	Lift Station 507 Upgrade	2011
32	Belmont AWT Plant Improvements	Rerouting of in-plant flows and diversion of flows from Belmont to Southport plant	2009
18	CSO 137	Near Eastside Regional Sewer Separation	2021
20	CSOs 217 and 218	CSO 217 and 218 Elimination	2021
9	N/A	Belmont AWT Gravity Belt Thickeners	2008
4, 12	CSO 080, 084 and 118	CSO Overflow Controls in Neighborhoods; Real Time Evaluation Control Evaluation, Phases I and II	2003, 2008
10	CSO 275	Sewer Separation at White River and Thompson Road	2007
11	CSO 235	Sewer Separation at Lick Creek	2007
8	CSOs 034 and 035	Consolidation of Pogues Run Outfalls (Phase I and II), Dorman Street Sewer Rehabilitation	2006
7	N/A	Belmont Advanced Wastewater Treatment (AWT) Plant Improvements	2006
2	CSOs 063, 063A and 65	Fall Creek Inflatable Dams	2004
5	CSO 101	Pogues Run Inflatable Dam at Brookside Park	2004
1, 6	CSO 039	White River Screen at IUPUI, White River East Bank Overflow Storage & Primary Treatment	2002, 2004
3	CSO 156	Modifications to Lift Station 507 @ Riviera Club	2002



# INDIANAPOLIS STORAGE TUNNEL SYSTEM



## LEGEND

INDIANAPOLIS STORAGE  
TUNNEL SYSTEM  
\*PRELIMINARY TUNNEL ALIGNMENT

CSO OUTFALL

NEW LIFT STATION

EXISTING INTERCEPTORS

WATERWAYS

## Deep Rock Tunnel Connector

Combined sewers are a method for conveying both storm water and sewage in one system. The Deep Rock Tunnel Connector, Indianapolis' largest CSO project to date, will address CSO 008 near Harding Street and the White River; CSO 117 near Southern Avenue and the White River; and CSO 118 near West Street and White River Parkway East Drive. The Deep Rock Tunnel Connector, which will be constructed more than 250 feet below ground surface in bedrock, will be the first phase of the City's overall tunnel storage and transport system. The tunnel will have an internal diameter of 18 feet.

From the Deep Rock Tunnel Connector, additional storage tunnels will be extended along White River, Fall Creek, Pleasant Run and Pogues Run to create a collective, underground storage facility for sewage. Utilizing a "storage and transport concept," raw sewage captured at the CSOs will be stored in the tunnel and then transported to the wastewater treatment plant.

The Deep Rock Tunnel Connector will have the capacity to store millions of gallons of raw sewage during large storm events, and when the project is complete, sewage overflows into Indianapolis waterways will be significantly reduced. In November 2011 Citizens Water, the new operator of the wastewater system, accepted a bid of \$179.3 million to construct the Deep Rock Tunnel Connector. The bid was approximately \$106 million below the engineer's estimate and is expected to result in significant savings to rate payers and lower sanitary sewer rates.

Construction is expected to begin in early 2012 and conclude by Dec. 31, 2017.



Constructed underneath the City, the Deep Rock Tunnel Connector tunnel will be 18 feet in diameter, seven miles long and 250 feet below ground.

## Belmont Advanced Wastewater Treatment (AWT) Plant, Wet Weather Secondary Treatment Expansion

To resolve capacity problems at the Belmont AWT Plant, DPW will double the secondary treatment capacity from 150 million gallons per day (MGD) to 300 MGD. The secondary expansion will eliminate partially treated sewage overflows by more than 1 billion gallons per year and improve water quality in the White River. Construction at the Belmont AWT Plant began in March 2010, and the \$53.6 million project will be completed by December 2012.



To resolve capacity problems at the Belmont AWT Plant, DPW will double the secondary treatment capacity from 150 MGD to 300 MGD. In 2010, crews poured the concrete foundation on which the secondary treatment expansion project will be constructed.

## Pogues Run Sewer Separation and Drainage Improvements

To significantly reduce the volume and frequency of raw sewage overflows and improve drainage on the east side of Indianapolis, DPW is completing a sanitary sewer separation and installing a storm sewer pipe parallel to the existing sewer pipe along 21st Street. Green infrastructure also is being incorporated to capture, cleanse and slowly release storm water into rivers and streams. The \$3.8 million project began construction this summer and will be completed by December 2012.

### Crooked Creek Area Sewer Improvements (Belmont North Relief Interceptor)

The Belmont North Interceptor sewer serves the growing populations of Center, Pike, western Washington and northeastern Wayne townships. Once fully developed, the area is expected to generate an increase from 11 million gallons of sewage on a typical day to nearly 50 million gallons of wastewater. A new, seven-mile Belmont North Relief interceptor, which is part of CD Control Measure 30, will increase capacity in the sanitary sewer and also create additional capacity needed to connect thousands of homes to the sanitary sewer as part of the Septic Tank Elimination Program (STEP). The \$58 million project began construction in 2009 and will be completed by early 2012.



Portions of the Belmont North Relief Interceptor and the Castleton Relief Sewer projects were constructed using a microtunneling boring machine (shown above). Access shafts, placed every 500 to 1,000 feet, allow crews to bore large holes in the soil and place the pipe with reduced surface disturbance.

### Castleton Relief Sewer

In 2010, DPW began construction of the new Castleton Relief Sewer, which will increase sanitary sewer capacity and eliminate raw sewage overflows into Howland Ditch. The relief sewer, which is part of sanitary sewer discharge Control Measure 7, will connect to the Williams Creek Interceptor north of Broad Ripple Park at 71st Street and Crittenden Avenue and extend northeast to the 75th Street and Allisonville Road area. DPW anticipates that the relief sewer will eliminate raw sewage overflows along Howland Ditch near 75th Street and Allisonville Road, as well as basement backups. The project also will create additional capacity needed to connect more than 700 homes in the area to the sanitary sewer as part of STEP. The \$13.4 million project will be completed by late 2013.

*“It is very much in the interest of the business community, as well as that of every resident and organization in Marion County, that we address the sewage overflow issue aggressively. I am gratified to see Mayor Ballard and his administration making these tremendous strides with efficiency — getting more done than planned in less time at a lower cost.”*

— Deborah Daniels, Greater Indianapolis Progress Committee



# IMPROVING STORM WATER MANAGEMENT



*Torrential rains and the flooding they can cause are events to which residents and weather professionals can merely forecast and react. However, DPW is making strides toward preparing Indianapolis neighborhoods for these rain events by repairing and creating new drainage structures, stabilizing area creeks and building flood control structures.*

## **Frog Hollow/Highland Creek and White River Storm Water Diversion Project**

After decades of flooding and promises of flood control projects, Mayor Ballard and DPW engineers came up with an innovative solution to alleviate the Frog Hollow neighborhood's flooding issues. Frog Hollow, a neighborhood on the City's southwest side, is situated along Highland Creek. This creek becomes overwhelmed with water during rain events as other streams feed into it north of the Frog Hollow neighborhood. Engineers designed a plan to solve two problems: reduce flooding in the Frog Hollow area and clean up a vacant lot, which was used as a dumping ground. The City removed years of trash and debris from the lot and is creating a wetland which will capture 80 percent of storm water during rain events and will be a haven for birds, butterflies and animals. Native plants and trees will be used to absorb the water, and future uses include an outdoor classroom for area students to visit and discover the functions and beauty of a working wetland. The \$3 million project will be completed in early 2012.



Mayor Greg Ballard and DPW staff announce the Frog Hollow project on July 1, 2008.



DPW engineers designed a wetland to capture and absorb storm water. The wetland will be both beautiful and functional.

## **Kessler Boulevard Drainage Improvement Project**

In 2009, DPW completed a \$1.6 million project that alleviated flooding and standing water issues from one of the City's most heavily traveled corridors, Kessler Boulevard. New storm sewers were installed and will collect water and direct it to Crooked Creek.

## Mars Hill/South Wayne Neighborhood Storm Water Improvements

In 2009, the westside neighborhood of Mars Hill received relief from flooding and damaged roads resulting from years of standing water. DPW engineers developed a plan to alleviate these issues while allowing more than 400 residents to retain some neighborhood conveniences such as on-street parking. DPW re-routed storm water runoff to drain to nearby State Ditch, installed drainage systems, incorporated best management practices to help improve water quality, repaired an eroding embankment along State Ditch and repaved streets. The \$5.5 million project was completed in 2009.



*The Mars Hill neighborhood streets often flooded after rain events.*



*Residents now enjoy smooth streets and improved storm water management.*

## The Hybrid Ditch

A hybrid ditch uses swales and perforated pipe to guide water, which otherwise could pond in ditches, into the ground. During heavier rains, excess water that is unable to quickly soak into the ground will enter inlets and flow directly into the storm drain system. This type of drainage system helps reduce flooding and standing water and also provides treatment to filter the water.



After an excessive morning rain, the hybrid ditch holds large amounts of rainfall.



Hours later, the water percolates through the perforated pipe, water levels recede and storm water is conveyed through the pipe or absorbed into the ground.



By afternoon, all of the water has been absorbed by the hybrid ditch system.



### Northern Estates Drainage Improvements

The streets and yards in the Northern Estates neighborhood have flooded during storms for many years. DPW designed and constructed a hybrid ditch system, which includes an underdrain system and swale. The improved storm water system drains the water off the pavement and sends it to Crooked Creek. This \$500,000 project was completed in 2010.

### Pendleton Pike and Shadeland Avenue Storm Water Improvements

In the Pendleton Pike and Shadeland Avenue neighborhood, DPW repaired existing storm systems and built new structures where needed. In addition, subsurface drains were installed to divert storm water and allow it to slowly percolate into the ground. Roadside ditches were re-established and streets were also resurfaced. The \$3.6 million project was completed in late 2011.

### Wanamaker Drainage Improvements

Downtown Wanamaker has long experienced flooding during heavy rain events. DPW is currently designing \$2.8 million in drainage and transportation improvements for the area. DPW will construct a storm water conveyance system designed to move water, which pools in the streets and sidewalks, and discharge it into Big Run Creek. DPW will complete these improvements in 2012.

### Sten Court Storm Water Improvements Project

During June 2008, Indianapolis and many other communities experienced severe flooding after several heavy rain events. Sten Court, located on the City's south side, was overwhelmed with storm water in a short period of time, making it unsafe for residents to leave their homes. Mayor Ballard quickly called for this project to be a priority for DPW engineers. Sten Court provided some challenges as the court style of street does not always allow for traditional drainage structures. Engineers devised a plan to install hybrid ditches behind residential property to best capture storm water. The \$250,000 project, which affected approximately 35 homes, was completed in 2010.



*Even during average-size rain events, the Sten Court neighborhood would experience severe flooding.*



*After the installation of the hybrid ditch, water drains to the backyards of homes where it is captured and treated.*

# ELIMINATING SEPTIC TANKS

*In Indianapolis and Marion County, more than 25,000 homes are still served by private septic systems, which have a limited life and eventually fail. Septic systems can leach human waste into groundwater, backyards, neighborhood ditches and streams. The Septic Tank Elimination Program (STEP) dramatically improves water quality and also helps combat public health issues associated with poor water quality.*

Since 2008, DPW has worked diligently to convert many neighborhoods on septic systems to the City sewer system.

The majority of STEP work was accomplished in 2009, 2010 and 2011 after Mayor Greg Ballard set a goal to complete 7,000 septic tank eliminations from 2009 to 2013. As of Aug. 25, 2011, approximately 3,300 connections had been completed.

DPW completed projects in the Franklin/Southeastern, Brill/Troy and Southeastern/Troy neighborhoods in 2009, 2010 and 2011 respectively. The projects completed were identified as a “high” priority, according to the City’s STEP Master Plan, which was updated in 2009. In the master plan, DPW categorized all projects as a “high,” “medium” or “low” priority based on 12 specific criteria, including but not limited to septic failure rate, presence of residential wells and petitions from residents or the Marion County Health Department.

Updates to the STEP Master Plan and standardization of internal engineering processes have allowed the City to make significant strides in STEP since 2008. Upon taking ownership of the wastewater utility, Citizens Energy Group plans to fulfill the mayor’s goal to transition 7,000 homes to the sanitary sewer.

The benefits of STEP improvements are far reaching: reduced health and environmental hazards, cleaner neighborhood streams and potential for improved property value when failing septic systems are abandoned.



*“Eliminating raw sewage from backyards, ditches and streams is a tremendous public health benefit that extends beyond the boundaries of the neighborhood receiving the sewers.”*

— Virginia A. Caine, M.D., director,  
Marion County Public Health Department

## Homeowner Responsibilities

**Homeowners in STEP areas are responsible for three main costs:**

**1. Construction costs on private property.**

These costs include paying a licensed contractor to abandon the septic tank and install a lateral line that connects the home to the City sewer. Current costs for these services are approximately \$2,000 to \$2,500.

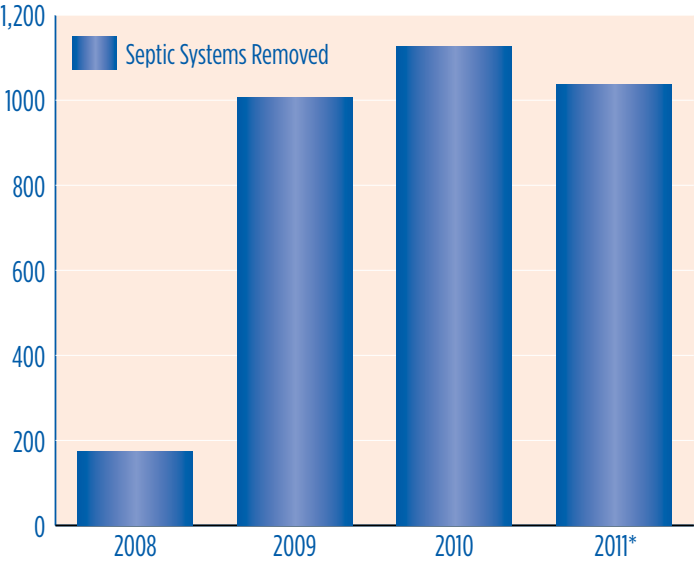
**2. A sewer connection fee.**

Homeowners pay the sewer connection fee in one lump sum or over five years if they qualify for the City’s STEP Financial Assistance Plan. In 2011, the connection fee was \$2,530 and was adjusted annually based on the Consumer Pricing Index (CPI). Late in the year, the Indiana Utility Regulatory Commission (IURC) ruled that the fee will no longer be adjusted based on the CPI.

**3. A monthly sewer bill.**

Currently, the sewer bill for an average home using 5,400 gallons a month is \$18.34 per month.

SEPTIC SYSTEMS REMOVED



*\*Septic systems removed in 2011 were completed from January through August 25.*



*Workers prepare to install new pipe for the Sunset and Kessler STEP project.*



*Construction continues on the Five Points and Southeastern STEP project.*



# OPERATIONS AND MAINTENANCE



*When sanitary sewer and storm water improvements are completed, DPW's construction responsibilities come to an end, but the operations and maintenance responsibilities are just beginning. DPW manages, operates and maintains Indianapolis sewers to ensure that sewage is safely and effectively transported to the City's two wastewater treatment plants. Long-term maintenance also is essential to prevent drainage problems and to prolong the life of the City's infrastructure.*

DPW works with United Water, the contract operator for the City's wastewater collection and treatment system, to facilitate the wastewater treatment process and achieve full compliance with federal permits and pollutant removal requirements.

Indianapolis operates two wastewater treatment plants, the Belmont Advanced Wastewater Treatment (AWT) Plant and the Southport

AWT Plant. Combined, these facilities have the capacity to fully treat 300 million gallons per day (MGD) of wastewater. In addition, more than 4,500 miles of sanitary and storm water sewers in Indianapolis and Marion County require around-the-clock attention and care, so United Water also completes regular operations and maintenance as part of its contract.



*Indianapolis operates two wastewater treatment plants, the Belmont AWT Plant (above) and the Southport AWT Plant. Combined these facilities have the capacity to fully treat 300 million gallons per day (MGD) of wastewater.*

United Water conducts preventive maintenance such as sewer cleaning, televising and inspection in an effort to reduce emergency repairs, minimize sewage overflows and backups, as well as curtail unsafe neighborhood flooding due to blockages and debris. Predictive maintenance also is completed to identify potential problems, and depending on testing results, preventive maintenance is scheduled as follow-up.

Maintenance activities from 2008 through July 31, 2011, are recorded in the tables included with this summary. DPW was recognized in 2011 by the National Association of Clean Water Agencies (NACWA) for outstanding operations and maintenance of its sanitary sewer system.



*As part of storm water operations and maintenance, DPW volunteers and United Water label storm drains with markers that say “No Dumping – Drains to Streams” From 2008 to 2010, nearly 17,000 storm drains were marked as part of the City’s Storm Drain Marking Program. Storm Drain Marking is a requirement of the City’s National Pollutant Discharge Elimination System (NPDES) Storm Water Permit.*

## CONTRACT OPERATOR SEWER CLEANING & MAINTENANCE ANNUAL PRODUCTION SUMMARY

Activity	2008			2009			2010			2011*		
	Sanitary	Storm	Total	Sanitary	Storm	Total	Sanitary	Storm	Total	Sanitary	Storm	Total
Sewer line cleaning (feet)	1,423,836	651,983	2,075,819	2,207,417	62,909	2,270,326	2,010,349	87,459	2,097,808	887,166	N/A	887,166
Solids removed during cleaning (tons)	N/A	N/A	1,561	N/A	N/A	1,288	N/A	N/A	1,984	N/A	N/A	693
Sewer line televising/ inspection (feet)	553,083	308,001	861,084	435,899	226,094	661,993	897,143	452,983	1,350,126	N/A	N/A	377,279
Structure cleaning	7,386	9,197	16,583	6,938	24,523	31,461	7,205	16,871	24,076	3,045	5021	8,066
Structures repaired or replaced	47	851	898	25	522	547	68	934	1,002	376	68	444
Sewer lines repaired or replaced (feet)	1,218	5,377	6,595	1,034	6,423	7,457	1,782	8,004	9,786	2,518	1771	4,289
Spillway and outfall repairs	2	49	51	2	51	53	1	46	47	0	24	24
Manhole adjustments	287	5	292	439	3	442	187	14	201	21	2	23
Combined sewer outfall inspections	51,983	0	51,983	47,756	0	47,756	45,671	0	45,671	12,655	0	12,655
Ditching (feet)	0	40,641	40,641	0	40,984	40,984	0	42,272	42,272	0	17547	17,547

\*2011 production numbers include Jan. 1-June 30.

Note: This summary does not include sewer maintenance and repair conducted under separate agreements with DPW.

Note: Solids removed during cleaning is not recorded by asset type.



# INDY SNOW FORCE

Indy Snow Force is a division of the Department of Public Works with the mission of making Indianapolis' streets as safe as possible when snow and ice hit. As a city organization, Indy Snow Force focuses on the roadways residents depend on most before, during and after winter's worst weather. On January 31, 2011, residents experienced one of the nastiest winter weather events in recent years. The ice storm required a team effort of more than 260 City staff working non-stop for 8 days. Before the ice storm hit, Indy Snow Force prepared by implementing a set of pre-planned strategies to provide the best service to residents.



## 2011 ICE STORM RESPONSE

**Morning:**  
Indy Snow Force activates its ice control plan, and 80 drivers pre-treat the City's primary thoroughfares and secondary streets.

**Evening:**  
Overnight, crews continue to salt City streets and prepare key Indy Parks public safety facilities.

Monday, Jan. 31

**Morning:**  
Crews address icy conditions during a lull in the brewing weather system.

**Afternoon:**  
Mayor Ballard issues an orange level travel watch; drivers are encouraged to travel only if necessary, to and from work and for emergencies.

**Evening:**  
The challenge to keep streets safe intensifies when freezing rain begins. Indy Snow Force continues salting the streets during the overnight hours.

Tuesday, Feb. 1

**Morning:**  
By rush hour, primary and secondary streets are drivable. The travel watch is downgraded to yellow, and residents are encouraged to be careful. Mayor Ballard leads a strategy meeting to discuss resident safety, school assistance and begin trash pickup on a one-day delay.

**Afternoon:**  
To help children return to school, crews clear connectors, major streets and intersections near Indianapolis Public Schools (IPS). Full-time crews plow primary and secondary streets, and 15 one-ton solid waste trucks assist.

**Evening:**  
Indy Snow Force maintains a full call out of 80 drivers and relies on support from solid waste crews, Indy Parks and contractors to keep streets safe. City staff members begin contacting school officials to offer assistance.

Wednesday, Feb. 2

**Get Connected**

**Website:**  
[www.indysnowforce.com](http://www.indysnowforce.com)

**Twitter:**  
[@IndySnowForce](https://twitter.com/IndySnowForce)

**Morning:**  
Mayor Ballard meets with key personnel to continue discussions on how to plow residential areas and help children return to classrooms.

**Afternoon:**  
Contract crews remain focused on salting and clearing streets near schools. Primary and secondary conditions also improve while Indy Snow Force salts and plows as necessary.

Thursday, Feb. 3



Fleet Improvements Enhance Resident Service

Mayor Ballard and DPW Director Sherman’s leadership has played a key role in improving the City’s response to winter weather events.

Prior to 2008, the City never sent snowplows into neighborhoods, but Director Sherman revised this policy based on resident input. Neighborhoods are now plowed when 6 inches or more of snow falls during a single event, and during heavy snowfall, the City also beefs up its fleet with approximately 300 contracted drivers to salt and plow the streets in a 24-hour period.

During 2009 and 2010, DPW re-energized the City’s fleet with a total of 57 brand new snow trucks, a replacement of approximately 80 percent of the snow removal fleet. Some vehicles as old as 1995 were taken out of service with these improvements. The new snow trucks carry an additional two to three tons of salt, which minimizes stops to reload and results in ultimately more time clearing off streets. They also are outfitted with diesel particulate filters (DPFs) to reduce air pollution by as much as 90 percent.



As part of a 5-year vehicle replacement strategy, the City plans to replace almost all DPW vehicles with newer, better equipment that will provide City residents with quicker, more efficient services. In addition, to better manage resources, extend vehicle life and increase taxpayer savings, the City has implemented a vehicle maintenance program consisting of detailed daily pre- and post-inspections of vehicles and equipment.

To ensure continued safety to residents and visitors to Indianapolis this winter, DPW also is developing a winter weather response plan related to the 2012 Super Bowl.



<p><b>Morning:</b></p> <p>Indy Snow Force joins contractors and 15 one-ton trucks to clear neighborhood streets.</p>		<p><b>Morning:</b></p> <p>Before the storm arrives, Indy Snow Force pre-treats primary and secondary streets. Salting and plowing continues during a steady snowfall, and 15 one-ton trucks address neighborhood streets.</p>	
<p><b>Afternoon:</b></p> <p>As the next storm approaches, maintenance is performed on snow fleet vehicles, and three crews repair potholes on major City streets.</p>		<p><b>Afternoon:</b></p> <p>Indy Snow Force continues clearing major streets and residential areas along the City’s 375 snow routes.</p>	
<p><b>Evening:</b></p> <p>From 5 p.m. to midnight, Indy Snow Force and contractors assist IPS with salting 67 school parking lots and surrounding neighborhood streets.</p>		<p><b>Evening:</b></p> <p>DPW finally releases crews at 7 p.m. In the coming days, the focus of crews shifts to pothole repair.</p>	
Friday, Feb. 4		Saturday, Feb. 5	
		Sunday, Feb. 6	
		Monday, Feb. 7	

# RESPONDING TO CUSTOMER CONCERNS



*Staying connected with residents is of utmost importance to the success of all City initiatives. For DPW in particular, the opportunity to listen to the challenges that neighborhoods, community groups and businesses are facing provides a unique perspective to virtually every project. Through open-ended communication and innovative problem-solving, DPW provides efficient and effective customer service to the residents and visitors of Indianapolis.*

DPW and the Mayor's Action Center (MAC) work in partnership to address the infrastructure problems in the Indianapolis community. Each year, customer service representatives receive hundreds of sanitary sewer, transportation and storm water-related requests. Once reported, MAC representatives, township coordinators and DPW engineering staff work collaboratively to investigate and resolve customer concerns.

The City has closely examined the customer service process for opportunities to increase public accessibility and streamline operations. Today, the result is a quicker, more thorough response to residents. Since 2008, DPW has resolved nearly 14,000 service requests.

In August 2009, as a supplement to the MAC call center, the City launched an improved version of the MAC website, [www.indy.gov/MAC](http://www.indy.gov/MAC), which offers valuable information and an online service request form to residents.

Less than a year later, Mayor Ballard introduced RequestIndy, yet another resource for residents to access city government. This online portal allows individuals to request services, report issues and open service requests online, 24 hours per day, 7 days a week, 365 days a year. Requests are submitted within moments to DPW or the appropriate City agency and can be monitored online. To ensure

maximum connectivity, the City also created RequestIndy Mobile, a free application for iPhone, iPad and iPod Touch devices.

Finally, in August 2011, the RebuildIndy interactive map tool became available to the public. Residents can enter an address and instantly view projects that are underway in their area. Street resurfacing, bridge, sidewalk, storm water and sanitary sewer projects in your neighborhood can be viewed with the map tool.

## SERVICE REQUESTS RESOLVED

Description	2008	2009	2010	2011*
Sewer backups or surcharges+	270	248	179	201
Broken structure	89	150	111	87
Cave-in or depression	868	819	821	517
Ditching	84	122	58	32
Manhole	236	286	254	115
Obstructed structure	45	34	47	48
Odor^	346	300	341	101
Overflows	234	176	134	192
Storm sewer problem or drainage	1,819	1,743	1,374	1,439
Total Service Requests Resolved	3,991	3,878	3,319	2,732

*\*2011 data is through August 2, 2011.*

*+Includes broken grates only, not casting problems or collapsed inlets.*

*^Includes odor concerns at manholes only, not industrial or lift station odor concerns.*

## Stay Connected

**Mayor's Action Center:** (317) 327-4MAC

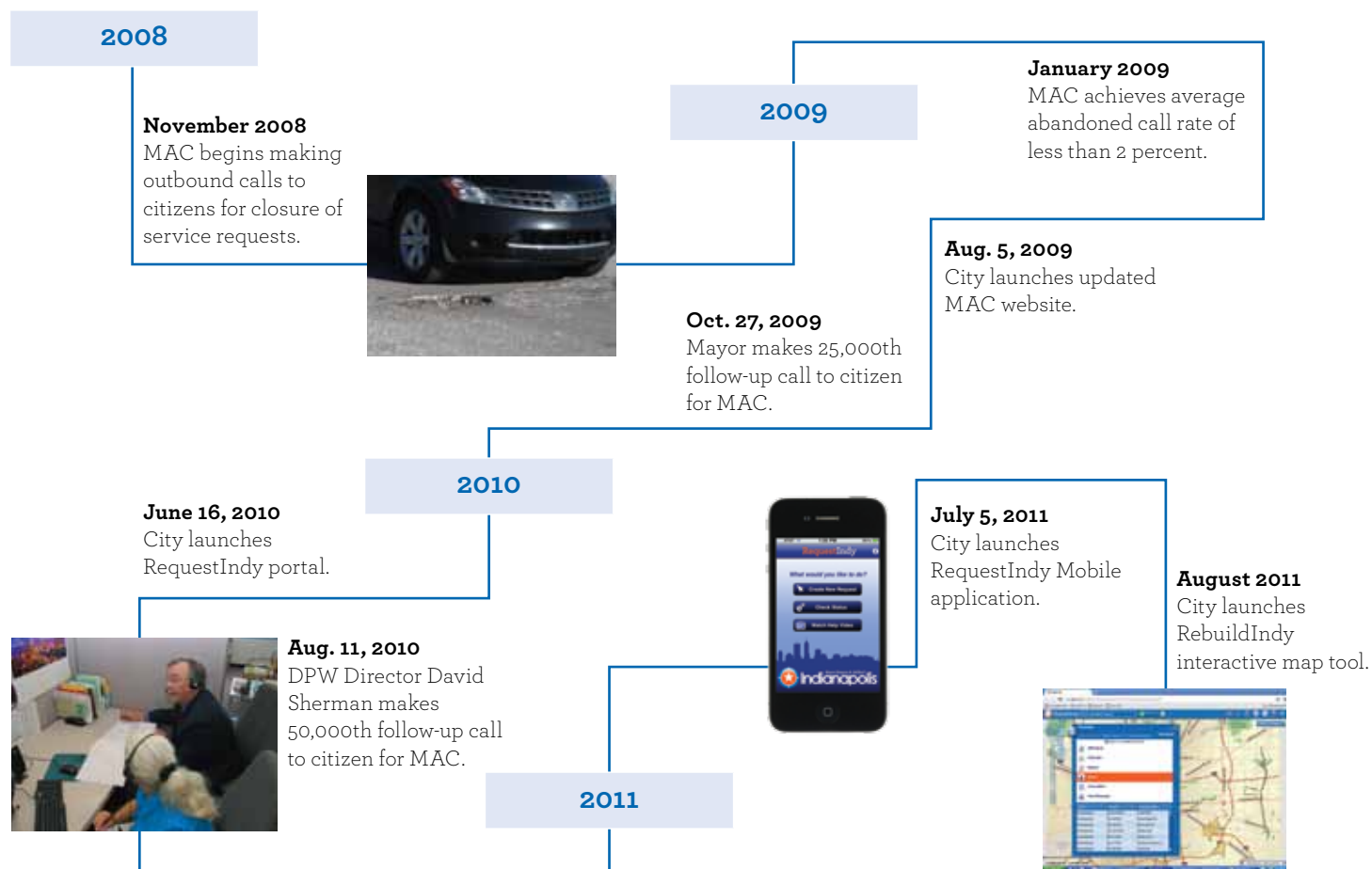
**RequestIndy Online Portal:** [www.maps.indy.gov/RequestIndy](http://www.maps.indy.gov/RequestIndy)

**RequestIndy Mobile:** Download for free on iPhone, iPad and iPod Touch

**Interactive Map Tool:** [www.indy.gov/RebuildIndy](http://www.indy.gov/RebuildIndy)



# CUSTOMER CONCERNS RESPONSE TIMELINE



*“RequestIndy Mobile offers yet another way to connect with city government. This is the next phase of development for the MAC in its mission to deliver outstanding customer service, and I am pleased to be able to tell residents, ‘We have an app for that.’”*

— Mayor Greg Ballard

# COMMUNITY INVOLVEMENT

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*Community interaction and involvement are DPW's top priorities. Reaching out to the community allows DPW to be transparent and talk one-on-one with residents about neighborhood projects and specific concerns or to educate the public about the RebuildIndy program.*

In order to inform and engage the community, DPW conducts a variety of outreach activities with residents, businesses, students, local organizations and environmental leaders. DPW exhibits at community events such as Indianapolis Metropolitan Police Department (IMPD) Community Days, Earth Day Indiana and neighborhood group meetings. Quarterly, sanitary sewer and storm water advisory committees are also invited to meet with DPW staff to provide input on DPW programs.

In 2010, DPW began implementing countywide meetings which are designed to educate and inform residents and business owners about the work DPW is doing in their neighborhoods. DPW is completing an unprecedented amount of work in a very short time and is committed to keeping an open line of communication with the residents of Indianapolis.

Since 2008, some of DPW's accomplishments with regard to community involvement include:

## **Sought Public Input**

- More than 100 public meetings were held.
- Area residents, business owners, neighborhood associations, city-county councillors, mayor's neighborhood liaisons and other stakeholders were invited to attend public meetings.
- DPW regularly attends community events, such as IMPD Community Days and Earth Day Indiana. In 2011 alone, DPW attended 10 such community events.

## **Supported the Science Bound Program**

- More than \$170,000 has been donated to the Science Bound program through the Purdue Science Bound/IPS Scholarship Fund Golf Outing, coordinated by the City's RebuildIndy program, since 2008. The program fosters science education in Indianapolis Public Schools and offers the opportunity for scholarships to those that complete the course.
- More than 500 golfers have attended this yearly fundraising event.

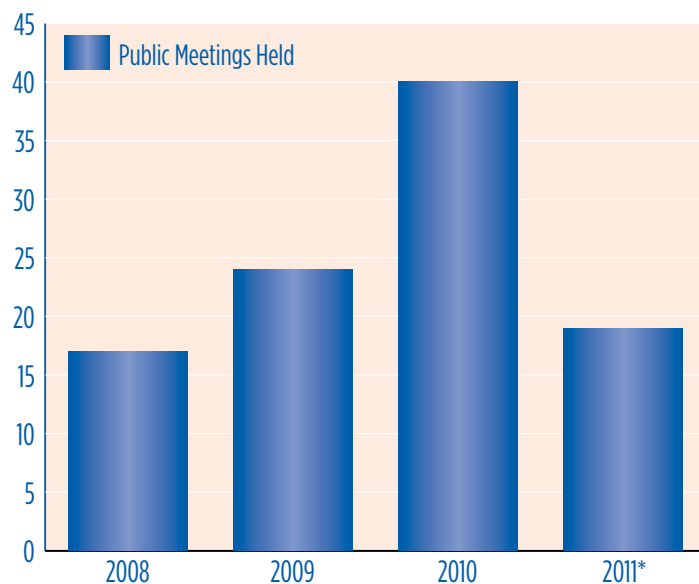
## **Mentored Thousands of Indianapolis Students**

- Through the annual "Make a Splash Indianapolis" Water Festival, more than 650 students and 28 teachers have participated in interactive water education activities.
- DPW engineers and consultants met annually with Indianapolis science students to celebrate National Engineers Week from 2008 through 2011. Engineers shared the details of gaining an education and career in engineering, presented projects they helped complete and spoke one-on-one with students. More than 120 engineers have participated since 2008 and have visited more than 50 classrooms.

## **Contributed Financially to Local Organizations**

- In 2011, DPW hosted 5 Cities Plus, a three-day conference for public works professionals in the Midwest. After all the planning was complete and the last bills were paid, 5 Cities Plus, at the recommendation of DPW staff, made the following donations:
  - \$20,000 to support the Purdue Science Bound/IPS Scholarship Fund
  - \$20,000 to support Keep Indianapolis Beautiful
  - A generous donation to support the community initiatives of the 2012 Indianapolis Super Bowl Host Committee

## DPW PUBLIC MEETINGS



\*Public meeting data for 2011 includes January to July 2011.



Earth Day, Indiana



Make A Splash Indianapolis



Purdue Science Bound/IPS Scholarship Fund Golf Outing

# GROWING THE ECONOMY

*DPW works in partnership with the Department of Minority & Women Business Development to ensure that Indianapolis is a city in which businesses and their employees can flourish. Under Mayor Ballard's leadership, DPW has discovered that infrastructure improvements and economic opportunities go hand in hand, and a commitment to each can foster improvement on both fronts.*

Since 2008, DPW has made the largest infrastructure investment in the City's history. These projects are providing opportunities for job creation and economic development in the Indianapolis community.

The City of Indianapolis estimates thousands of jobs will be created through road resurfacing, sidewalk repair and bridge rehabilitation. In addition, Citizens Energy Group will require skilled workers to help correct the City's sewer overflow problem and upgrade the water system.

To encourage economic development, DPW works with the Department of Minority & Women Business Development to create and promote a culture of inclusiveness for business opportunities; economic growth; and sustainability for minority-, women- and veteran-owned business enterprises. The City's minimum goals for contracts are as follows:

- Minority Business Enterprise (MBE): 15 percent
- Women's Business Enterprise (WBE): 8 percent
- Veteran Business Enterprise (VBE): 3 percent

Since 2008, DPW has consistently exceeded the City's goals for MBE and WBE firms for design and construction contracts. The percentage of work awarded to VBE firms also continues to increase from 0.06 percent when the classification was introduced in July 2008 to 1.51 percent in August of this year. On average, 30.1 percent

of payments for all sanitary sewer, storm water and transportation projects were made to MBE/WBE/VBE firms.

To encourage increased diversity and connect with local businesses, DPW also plans networking and educational events with the Department of Minority & Women Business Development. Recently, the City hosted a pre-bid reception for Indianapolis' largest CSO project, the \$275 million Deep Rock Tunnel Connector, and attended a business opportunity fair.

The Department of Minority & Women Business Development also ventures into the community to meet with organizations including the Indiana Construction Association; Associated Building Contractors; and local chapters of the American Council of Engineering Companies (ACEC), American Society of Civil Engineers (ASCE) and the National Association of Women Business Owners (NAWBO). The City has developed worthwhile partnerships, mentoring and business opportunities as a result of this outreach.



*Mayor Greg Ballard greets Greg Wilson, Director of the Department of Minority & Women Business Development at the Deep Rock Tunnel Connector project announcement.*

## Get Connected

**DPW:** [www.indy.gov/DPW](http://www.indy.gov/DPW)

- Planned Public Bids
- Specifications and Manuals
- MBE/WBE/VBE Vendor and Contractor Lists

**Department of Minority & Women Business Development:**  
[www.indy.gov/DMWBD](http://www.indy.gov/DMWBD)

- MBE/WBE/VBE Certification
- Business Resources
- Vendor Profiles

*“RebuildIndy will enhance our already great city, rebuild the parts that are broken and put the critically important building trades industry to work at a time when good-paying jobs are needed.”*

— Mayor Greg Ballard

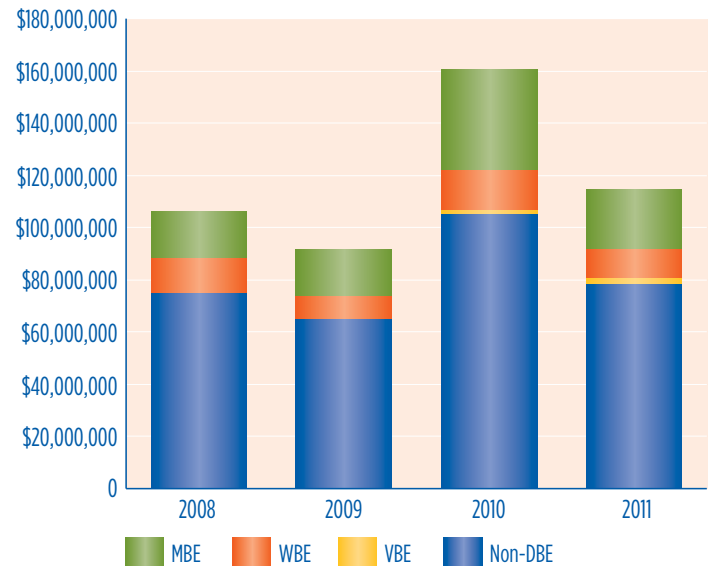


MBE, WBE and VBE Public Forum



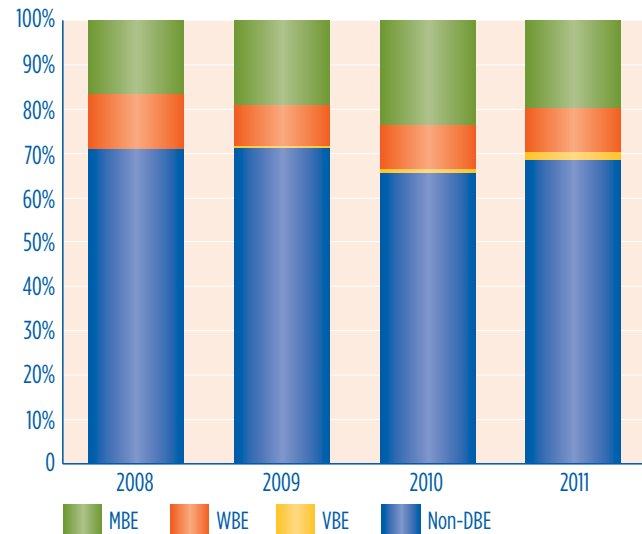
Diversity Fair

## DPW CONTRACT PAYMENTS (2008- 2011)\*



\*Payments to VBE firms were not tracked in 2008 and 2009. Payments are included from Jan. 1 through Aug. 3, 2011. The contract payments include those for sanitary sewer projects.

## DPW CONTRACT PERCENTAGES (2008- 2011)\*



\*The contract percentages include sanitary sewer projects



# 2011 CITY-COUNTY COUNCIL PUBLIC WORKS COMMITTEE



*The Public Works Committee approves ordinances and budgets for all environmental and infrastructure concerns of the city and county, including sewage collection and treatment, street resurfacing, trash pickup, drainage improvements, snow removal, solid waste management and traffic controls.*

**Ginny Cain, Chair**



**Dane Mahern**



**Mary Moriarty Adams**



**Benjamin Hunter**



**Angela Mansfield**



**Jack Sandlin**



**Brian Mahern**



**Janice McHenry**



**Christine Scales**



*Note: Mike Speedy, former District 24 councillor, served as Public Works Committee chair from January to November 2010.*

# 2011 BOARD OF PUBLIC WORKS

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*The Board of Public Works meets on the second and fourth Wednesday of the month to approve professional service agreements, construction bids and other public works expenditures, as required by the City-County Council.*

**David Sherman,**  
*Chair, DPW Director*



**Dennis Rosebrough**



**Laura Sniadecki**



**Dorothy Henry**



**Tony Samuel**



**Cassie Stockamp**



**Robert Parrin**



*Note: The Board of Public Works also consists of legal counsel and a secretary.*

# AWARDS AND RECOGNITION

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*Under Mayor Ballard's leadership, DPW aggressively increased its efforts to improve the quality of life for the residents and businesses of our community. Clean water and air; safe and accessible streets and sidewalks; and a walkable, bikeable, busable community have all been priorities since 2008. The result of DPW's efforts is a community under transformation, and people have definitely taken notice, both locally and nationally. Below are just a few ways in which the City and Mayor Ballard have been honored for their efforts.*

## **2008 Engineering Excellence Honor Award**

- Award Sponsor: American Council of Engineering Companies of Indiana (ACEC)
- Description: Consolidation of Combined Sewer Overflows (CSOs) 034 and 035

## **2008 Platinum Peak Performance Award**

- Award Sponsor: National Association of Clean Water Agencies (NACWA)
- Description: Belmont AWT Plant recognized for 100 percent compliance with 2010 clean water standards

## **2009 Outstanding Floodplain Project Award**

- Award Sponsor: Indiana Association for Floodplain and Storm Water Management
- Description: City of Indianapolis Flood Response Plan

## **2009 Outstanding Storm Water Project Award**

- Award Sponsor: Indiana Association for Floodplain and Storm Water Management
- Description: City of Indianapolis Green Supplemental Document

## **2009 Platinum Peak Performance Award**

- Award Sponsor: National Association of Clean Water Agencies (NACWA)
- Description: Belmont AWT Plant recognized for 100 percent compliance with 2010 clean water standards

## **2010 100 Best Fleets in North America**

- Award Sponsor: Government Fleet Magazine
- Description: The DPW Fleet Services Division was honored as one of the top 100 fleets in North America; ranked 53rd out of a possible 38,000 eligible fleets in Indianapolis' debut year, the City

was recognized for its success along with major municipal fleets including New York City, Atlanta, Denver and Las Vegas

## **2010 Panel Presentation at American Water Summit**

- Presenter: Mayor Greg Ballard
- Description: Mayor Ballard presented on a six-member panel focused on new funding models for infrastructure; the American Water Summit expressed particular interest in his innovative plan to transfer Indianapolis' water and wastewater utilities to Citizens Energy Group

## **2010 Best Practices Presentation at U.S. Conference of Mayors Water Summit**

- Presenter: Mayor Ballard
- Description: Gathered with the nation's city leaders, Mayor Ballard offered his perspective on the City's Consent Decree Enhancement Plan, the water and wastewater utilities transfer, RebuildIndy infrastructure improvements and SustainIndy programs

## **2010 Platinum Peak Performance Award**

- Award Sponsor: National Association of Clean Water Agencies (NACWA)
- Description: Southport AWT Plant recognized for 100 percent compliance with 2010 clean water standards

## **2010 Outstanding Laboratory Award**

- Award Sponsor: Indiana Water Environment Association (IWEA)
- Description: Outstanding achievement in the implementation of laboratory technique and administration at Belmont AWT Plant

## **2011 Indiana Civil Engineering Project of the Year Award**

- Award Sponsor: American Society of Civil Engineers
- Description: Project Open Market was developed to spur

investment and create economic opportunity by removing the old Interstate-65/I-70 ramps on the near eastside and building a new interchange along Washington Street; the results are smoother traffic flow and improved pedestrian access

### 2011 Charles Walter Nichols Award for Environmental Excellence

- Award Sponsor: American Public Works Association
- Description: Director David Sherman was recognized for outstanding and meritorious achievement in the environmental field for his leadership as the City completed modifications to its CSO Consent Decree Enhancement Plan during 2010

### 2011 100 Best Fleets in North America

- Award Sponsor: Government Fleet Magazine
- Description: The DPW Fleet Services Division was honored as one of the top 100 fleets in North America; ranked 28th out of a possible 38,000 eligible fleets in Indianapolis' debut year, the City jumped up 25 spots on the list from 53rd in 2010



DPW was honored by Government Fleet Magazine in 2010 and 2011 as one of the top 100 fleets in North America. The City was recognized for its success along with major municipal fleets including New York City, Atlanta, Denver and Las Vegas.



## With a modified consent decree, Indianapolis is Cleaning Up

Indianapolis is the first city in nation to modify a CSO consent decree through better efficiencies and cost savings. By Pam Hunter

When Indianapolis Mayor Greg Ballard came into office in 2008, he inherited a combined-sewer and storm system that was averaging 1.7 billion gallons of overflow each year, according to federal officials. At the time, it was one of the most polluted sewer systems in the nation, with 100 of the combined-sewer in capacity and flood-prone areas.

Ballard also inherited a two-year-old consent decree with the U.S. Dept. of Justice to bring the city in compliance with the Clean Water Act as well as a project to expand its wastewater treatment system that was running over budget by an estimated \$100 million and months behind schedule. Due to a complete design approach, although the city had both separate storm and

sanitary sewers in some neighborhoods, development over the years had added behind-to-back, densely populated areas of the city. As far back as the early 1900s, combined sewer overflows (CSOs) were a problem for local residents during extended wet weather.

The modification plan was originally estimated to cost \$1.75 billion, but was quickly reduced to \$1.071 billion, mostly because of one innovation: use of the wastewater treatment plant. This kind of reuse was not acceptable to a mayor who had a record of cost-cutting and fiscal responsibility. For a city of more than 800,000 residents, says Mark Jacob, vice president with Colson, Ohio-based DLR, a program manager for the consent decree.

The mayor brought in industry veteran David Sherman, a former president of United Water to lead up the Public Works Dept. and take a hard look at the program. "Ballard wanted to make sure Indianapolis was a clean water city, that we took care of the environment," says Sherman.

Now, the mayor and other city groups are testing Indianapolis as a model for how to use value engineering to create cost savings and solutions that are better for the environment and save them off balance from the compliance plan.

Sherron worked with the existing engineering team, mostly local firms such as Indianapolis-based R.C. Armstrong. To create the plan, DLR brought in firms such as Overland Park, Kan.-based W&V and Bloomfield, Colo.-based HWI, both of which have experience working with consent decrees. "It was a collaborative effort—we had an open-door policy," Sherman says. The plan involved two main approaches: expanding the sewer system to collect more wastewater and changing the design of the sewage plant's secondary treatment system. In addition to the engineering approach, a separate group, also physical in nature, took on the water treatment plant, which would be a big step for the city's struggling to comply with the Clean Water Act.

#### Deep Rock Tunnel Connector Changes the Equation

The original consent decree required the city to construct 11 combined-sewer tunnels, including a 24-million-gallon-capacity shallow tunnel system, in order to reduce the city's overflow average of 1.7 billion gallons a year.

But the city decided to build a deep rock tunnel connector, which would bypass the shallow tunnel and discharge into the main sewer line. The connector would be 1.2 miles long and 10 feet in diameter. It would be built using a tunnel boring machine (TBM) and would cost \$100 million. The connector would be built in two phases. The first phase would be to build a 0.6-mile section from the city's main sewer line to the main sewer line. The second phase would be to build a 0.6-mile section from the city's main sewer line to the main sewer line.

David Sherman, director Indianapolis DPW

**BENEFITS OF DEEP ROCK TUNNEL CONNECTOR**

- Reduce and treat an estimated one billion gallons of raw sewage through 2015 plan, increasing the length of the connector to 1.2 miles
- Increase the capacity of the sewer system to collect more wastewater
- Reduce the use of raw sewage in the city's sewer system, reducing the amount of raw sewage in the city's sewer system
- And problems with odors and groundwater, because of the connector, because of the connector

**WASTEWATER**

**“The reason we saved the money and we're getting more sewage up early—we took a holistic approach.”**

In 2011, the City's amended CSO Consent Decree was recognized by Engineering News-Record magazine (ENR) as the first of its kind in the nation. This recognition is due to the Department of Public Works (DPW) use of a holistic approach to engineering, resulting in major cost savings and a more efficient design.

# OFFICE OF SUSTAINABILITY



*On Oct. 10, 2008, Mayor Ballard announced the creation of the Office of Sustainability. Mayor Ballard’s goal was to create an office dedicated to incorporating green efforts into City programs and projects. This office was established to develop a private partnership perspective for City efforts toward creating a more sustainable city. By partnering with local businesses, nonprofit organizations and residents, the Office of Sustainability has been able to make huge strides toward making Indianapolis a more livable city.*

## Green Infrastructure

Incorporating green infrastructure into DPW projects offers additional value to both the purpose of the project and the community. Many green features are beautiful, such as rain gardens. However, these beautiful projects are also highly functional and advantageous to infrastructure. Rain gardens allow for more infiltration of storm water than turf grass lawns or conventional landscaping. Rain gardens are effective in removing up to 90 percent of nutrients and chemicals and up to 80 percent of sediments from storm water runoff, allowing 30 percent more water to soak into the ground than traditional lawns.

Rain gardens completed in 2010:

- Ohio Street Project
- Alabama Street Project
- Indianapolis Cultural Trail
- Athenaeum Rain Garden (privately funded project)

In addition to rain gardens, the City of Indianapolis has successfully used porous pavement on streets, sidewalks and alleys to reduce the amount of flooding and storm water entering the City’s sewer systems. Porous pavement is a surface that allows water to pass through its surface and sub-base for infiltration into the soil below. These types of pavements provide the same structural support of conventional pavement, while providing many water quality benefits.

Porous pavement projects installed in 2010 include:

- Ohio Street Pilot Project: Street and sidewalks
- St. Clair Place: Alley (substantially completed in 2010)

## Green Fleet and Fuel Use Reduction

On Dec. 10, 2010, the City of Indianapolis was awarded the Greater Indiana Clean Cities Coalition Stakeholder Award in the hybrid category for its commitment to increasing hybrid vehicles in the City fleet. In 2009, 89 hybrid vehicles were added, and in 2010, the Department of

## GREEN ELEMENTS IN 2010 REBUILDINDY PROJECTS

Sidewalks replaced	21.4 miles
Sidewalks added	1.9 miles
Sidewalks widened from 4 feet to 6 feet	3.8 miles
Sidewalks widened from 6 feet to 8 feet	0.8 miles
Sidewalk infill	38 locations
Crosswalks upgraded	50 intersections
Crosswalk signs added	4 intersections at 22 signals
Crosswalk signals added	4 signs
Crosswalks added	28 intersections
Traffic signals optimized	157 intersections
Porous concrete streets added	317 square yards
Porous materials in curb and gutters	820 linear feet
Porous sidewalks or paths	317 square yards
Reused brick	47 square yards/9 tons
New tree plantings	81 trees
New vegetated areas	201 square yards



Public Safety ordered an additional 25 hybrid vehicles for delivery in early 2011. These vehicles average 36 miles per gallon and will save an estimated 630 gallons of gas per vehicle annually.

	2008	2009	2010
Number of hybrid vehicles	1	90	90
Fuel use (gallons)	388	28,718	39,085
Miles traveled	10,919	904,006	1,285,144
Average miles per gallon	28	31	33
Unleaded	3,205,160	3,155,687	3,038,678
E85	71,852	61,055	40,183
Percent of total fuel use - E85	2	2	1
Diesel	673,382	669,061	801,586
Biodiesel (B20)	23,788	26,388	19,673
Percent of Total Fuel Use - B20	3	4	2

### Energy Audits and Retrofits

In 2010, energy- and water-efficiency retrofits were completed at 28 fire stations. Retrofits at DPW, Department of Parks & Recreation, Indianapolis-Marion County Building Authority properties and the City Market commenced in early 2011. The City is saving 41 percent on the energy costs of operating traffic signals since retrofitting 400 signals and replacing 9,377 signal inserts with LEDs. The City spent \$604,666 for traffic signal energy use in 2009 and will save \$250,000 per year in energy costs.

In the spring and summer of 2010, DPW implemented high-efficiency street lighting projects on two bridges over the downtown canal. The Ohio Street Canal Bridge lighting was retrofitted with 24 induction light fixtures, resulting in a 50 percent energy savings over the old mercury-vapor lights and lasting 20 years. The LEDs are expected to last 12 years and will result in carbon emission reductions of approximately 56,614 pounds per year.

### Recycling

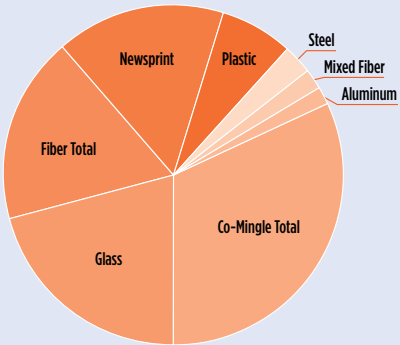
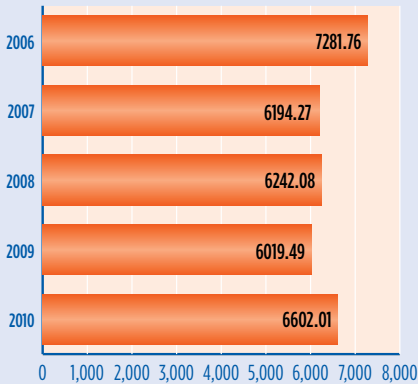
The City provides 27 containers throughout Indianapolis for no cost residential recycling drop-off. In addition to public drop-off containers, the City offers curbside recycling to all Indianapolis residents on a subscription basis for the average price of \$6.50 per month.

Since 2008, 18 City buildings have provided recycling programs for City employees. The City made a substantially larger commitment in October 2010 to expand the number of facilities that have recycling available, including fire and police stations, increasing the number of City and county buildings recycling to more than 100. As a result, 26 percent more glass, #1 - #7 plastics, aluminum, tin, steel beverage and food cans, newspapers, cardboard and magazines were diverted in 2010 compared to the previous year. The city also applied for a grant through the Indiana Recycling Coalition and was awarded 50 recycling bins, which are being placed at city parks.



*Jerri-Ann Garl of U.S. Environmental Protection Agency Region 5 commends Mayor Greg Ballard and the City of Indianapolis for continued efforts to encourage and expand recycling throughout Marion County.*

### PARTICIPATION IN CITY'S DROP-OFF RECYCLING



On Aug. 17, 2011, Mayor Greg Ballard and representatives from Lucas Oil Stadium, the Indianapolis Colts, Coca-Cola, Republic Services and the U.S. Environmental Protection Agency (EPA) unveiled a public education program designed to increase awareness and participation in recycling at Lucas Oil Stadium for the 2011 Indianapolis Colts season. The new “RecyclingIndy” logo and brand will encourage visitors to deposit empty bottles and cans into one of more than 200 recycling bins throughout the stadium. The outreach effort is supported by a \$42,600 EPA grant awarded to the City of Indianapolis in October 2010 to boost recycling at sports arenas.

### Green Building Initiatives

As a part of the City’s Sustainable Facilities Initiative, several demonstration solar and wind renewable-energy projects are planned for the City-County Building, along with implementation of a geothermal heat recovery chiller system that will harness the existing well water being pumped from the lowest level of the parking garage. The effort provides heating and cooling to the building as needed, saving on electrical consumption and steam usage. The City is also installing three solar water heating systems at Indy Parks locations for pool heating. Solar collectors will harness energy from the sun and transfer this energy into the water.

### Green Development

Effective August 1, 2010, the Office of Sustainability, in partnership with the Department of Code Enforcement, began offering an incentive for property owners and developers to renovate and/or construct buildings in a sustainable manner. The incentive, which qualifies building projects to receive up to 50 percent reduction on

permit fees associated with the project, also rewards building owners and developers for integrating sustainable design techniques and practices into building projects.

The Office of Sustainability takes a public-private partnership approach in its efforts. This is particularly appropriate in green building opportunities for development and construction. Under the City’s new green-building incentive, City government is providing cost savings for those organization’s interested in building a more earth friendly building. The private sector has responded with a dramatic boom in green-building development in projects undertaken by a wide variety of City partners, from public and private hospitals, nonprofit organizations and private corporations. Indianapolis currently has 39 ENERGY STAR-labeled buildings and 14 LEED-certified projects.



*The Nature Conservancy’s Efroymson Conservation Center is the first project in Indianapolis to seek the highest certification of LEED Platinum.*



*“Constructing earth friendly buildings is one of many ways organizations can positively impact the community. The new green building incentives offered by the City are expected to encourage green development in Indianapolis, bringing us one step closer to the mayor’s vision to be one of the most sustainable cities in the Midwest.”*

— John Hazlett, Director, Office of Sustainability

## Green Super Bowl

St. Clair Place is one of the green redevelopment projects funded by the Super Bowl 2012 Legacy Project. This transformational effort will work to address a variety of challenges facing this urban neighborhood. Thanks to Mayor Ballard's leadership and foresight, St. Clair Place is one of Indianapolis' first neighborhoods to receive a comprehensive sustainability plan. The addition of green components, such as rain gardens, porous concrete alleys, new tree plantings and directional street lighting, has a huge impact on the community. In this project alone, more than 326,630 gallons of storm water will be removed from the combined sewer system annually.

## Green Infrastructure Community Projects

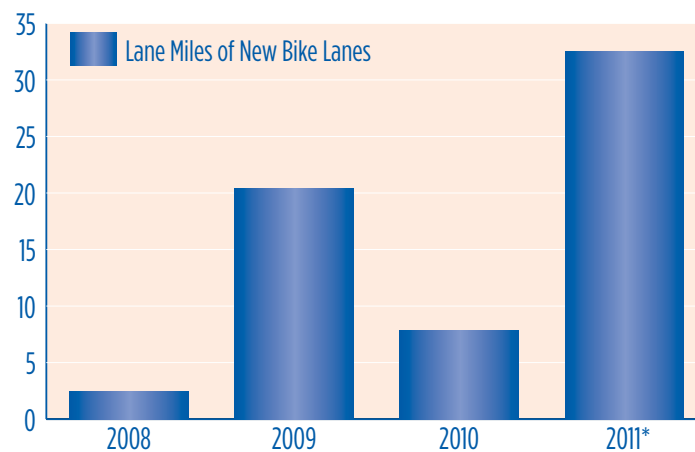
Projects throughout Indianapolis are incorporating green functions, resulting in functional and beautiful solutions to the problems they address. Some of the City's sustainable projects include:

**Fall Creek Bioretention Project:** This project was designed to improve water quality in Fall Creek. This project, the first of its kind for the City, used native plants, soil, stone and other natural elements to filter pollutants from storm water before releasing it into Fall Creek. For this project, DPW partially separated combined sewers and redirected storm water to a bioretention cell for treatment.

**The Ohio Street Project:** The Ohio Street neighborhood was plagued by crumbling sidewalks, deteriorating streets and drainage concerns for decades. The Ohio Street project, which relied on neighborhood partnerships with Cole Noble District Neighborhood Association, Indianapolis Downtown Inc., The Nature Conservancy and the Buchanan Group, drastically improved the quality of life for the residents and diverted an estimated 1.3 million gallons of storm water from the combined sewer system annually. The Ohio Street project included resurfacing from West Street to College Avenue and replacement of deteriorated sidewalks and curbs using sustainable porous concrete. Rain gardens were also installed to improve drainage in the area. The drainage improvements diverted 90 percent of the annual rainfall volume from the eastern most portion of the Ohio Street watershed area.

**Bike Lanes:** Mayor Ballard has made adding bike lanes to Indianapolis a priority, making the City more bikeable and connecting neighborhoods. The Office of Sustainability and DPW have partnered to transform the City biking landscape. Since 2008, approximately 63.15 lane miles of bike lanes have been added or are planned for Indianapolis.

## INDIANAPOLIS BIKE LANES



*\*At the end of the 2011 construction season, DPW will have added 32.52 lane miles of bike lanes.*



*Mayor Greg Ballard participated in the City's first Bike Ride for Kids as a part of the Mayor's Get Fit Indy! Initiative.*

# BETTER UTILITIES. BETTER CITY.

*The transfer of the water and wastewater utilities to Citizens Energy Group is a transformational partnership – one that will enable the City to address hundreds of millions of dollars in critical infrastructure needs and put the water and wastewater utilities into a public trust where they will be best managed without political interference. The City will repair the frayed fabric of the community by investing in infrastructure in neighborhoods neglected for decades.*

On July 21, 2009, the City initiated a Request for Expression of Interest (REI) seeking a variety of solutions to the City's crumbling infrastructure, water and wastewater systems challenges.

After receiving 24 submissions and hearing presentations from the nine most promising organizations, Citizens Energy Group (Citizens), a public charitable trust, was selected. The City and Citizens announced the signing of a Memorandum of Understanding (MOU) on March 10, 2010, after months of inviting input from residents and the business community.

Citizens pledged to operate the utilities for community benefit and create operating efficiencies that would lower costs. Combining the City's water and wastewater systems with Citizens's natural gas, steam and chilled water utilities will help to reduce future utility rate increases by 25 percent than currently projected. Citizens also committed to assume \$1.5 billion in debt, and the utility transfer will provide the City approximately \$425 million to fix streets, sidewalks and bridges, and to take down abandoned homes. These infrastructure improvements are part of the City's RebuildIndy program.

After four months of deliberation, the Indianapolis City-County Council approved the proposal to transfer the water and wastewater utilities to Citizens by a bipartisan vote of 19 to 10.

Two years after the REI was issued, the Indiana Utility Regulatory Commission approved the utility transfer on July 13, 2011. The proposal was approved following more than 60 meetings with the general public; businesses; employees; and community, faith, and union leaders.

Citizens assumed responsibility for the water and wastewater utilities on August 26, 2011.



Mayor Greg Ballard and Carey Lykins, President and CEO of Citizens Energy Group at the MOU Announcement on March 10, 2011.

***“Indeed, Indianapolis has a unique opportunity to place these vital assets in friendly hands. Citizens’ status as a public charitable trust means ownership is essentially public, but without the political ramifications and bureaucracy usually associated with government ownership.”***

— *Indianapolis Business Journal*

Editorial: Citizens’ utility deal is smart move, March 15, 2010



## Ensuring Clean Water and Healthy Neighborhoods

The transfer of the water and wastewater systems to Citizens Water will result in significant benefits to utility customers and Central Indiana communities.

### Citizens Energy Group Commitments

- **Safe drinking water** – Citizens Water will ensure safe, high quality drinking water. Citizens will take full responsibility for water safety, quality compliance and sound management of our water resources.
- **Well managed and more affordable utility service** – Under Citizens Water the community's water and wastewater systems will be in the hands of the community's public charitable trust, with a 124-year history of operational excellence and high customer satisfaction.
- **Smaller rate increases** – Citizens, which operates like a not-for-profit, will reduce combined water and wastewater rate increases 25 percent by the year 2025 through annual operating synergies totaling \$60 million.
- **Cleaner area rivers and streams** – Citizens Water will complete construction of the federally mandated Combined Sewer Overflow System to minimize sewer overflows into area rivers and streams. Citizens Water also is committed to continuing the City's Septic Tank Elimination Program (STEP), including about 7,000 septic tank replacements through the year 2013.



Utilities Transfer Public Forum



At the close of the utility transfer, Citizens assumed responsibility for the CSO Consent Decree with the U.S. EPA and IDEM. The plan includes a citywide tunnel system to reduce sewage overflows into local waterways. The first phase of the tunnel system was announced May 9, 2011.

# REBUILDINDY

*Launched in May 2010, RebuildIndy is Mayor Ballard's initiative to transform the city through investments in infrastructure improvements. Since its inception, the City has invested approximately \$169 million to restore deteriorating thoroughfares, residential streets, sidewalks and bridges, as well as address neighborhood drainage and flooding issues. The City also will demolish unsalvageable abandoned homes that pose a public safety threat to neighborhoods.*

## Key accomplishments of the RebuildIndy Program

From July 2010 to June 2011 these include:

- 467 lane miles resurfaced
- 13 bridges reconstructed
- 188,900 feet of sidewalks constructed
- 43 miles of bike lanes constructed
- 2,638 Americans with Disabilities Act (ADA) ramps completed
- 1,165 storm water manholes and inlets replaced/repairs\*
- 112,939 linear feet of storm sewer installed\*
- 2,775 linear feet of channel work completed
- 3 storm water quality units installed\*

\*All or a portion of this work was bid in May 2011 and was completed later in 2011.



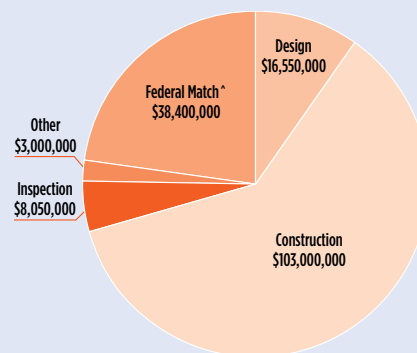
Village Way & 86th Street before and after renovation

## Indianapolis Parks Infrastructure Improvements

On July 7, 2011, Mayor Greg Ballard announced plans to invest \$2 million to restore infrastructure at Indianapolis parks as part of RebuildIndy. At 11 parks in Marion County, access roads, parking lots, entrances, curbs and sidewalks are being repaired or replaced, and the majority of the work was completed in fall 2011. Park improvements include:

- Brookside Park: Resurfacing near the family recreation center and entrances
- Eagle Creek Park north of 56th Street: Resurfacing the park entrance and entrance to the rowing center\*
- Eagle Creek Park south of 56th Street: Adding an entrance off of 56th Street and making drainage improvements\*
- Garfield Park: Resurfacing several parking lots and Conservatory Drive
- Perry Park: Resurfacing a parking lot and entrances
- Riverwood Park: Resurfacing an access road and a parking lot
- Sahm Park: Resurfacing an access road, the north parking lot and the main entrance from 91st Street to the fire station
- Soap Box Derby Hill: Resurfacing from 30th Street to Riverside Drive
- Southeastway Park: Resurfacing roads and installing paths to picnic shelters
- Tarkington Park: Resurfacing and repairing sidewalks
- Wes Montgomery Park: Resurfacing entrances, an access road and parking lots
- Alice Carter Park: Resurfacing the entrance

## REBUILDINDY INVESTMENT\* (JULY 2010-JUNE 2011)



\*The data includes July 2010 through June 2011, the timeframe during which the first Payment In Lieu Of Taxes (PILOT) bonds were issued by Citizens Energy Group to the City.

\*Federal match funding is typically applied to project construction costs.

### RebuildIndy Project Highlights

**38th Street Rehabilitation from I-465 to I-65** – Improvements include resurfacing of the concrete street with asphalt pavement, curbs, sidewalks, traffic signals, and bridge decks over Guion Road and the CSX RR tracks will be replaced.

**Georgia Street** – Once construction is complete, the new road will provide safe pedestrian access to both Conseco Fieldhouse and the Convention Center as well as a flexible event space in the street.

**62nd Multi-use Trail from Keystone Avenue to Allisonville Road** – This project includes the construction of 8,125 linear feet of new trails, crosswalks, 25 Americans with Disabilities Act accessible ramps and new pedestrian signals.

**Michigan Road Pedestrian Trail** – DPW will construct a shared path and resurfacing along Michigan Road from Cold Spring Road to Kessler Boulevard, a shared path and drainage system update from Kessler Boulevard to 75th Street and a shared path from 75th Street to just south of 86th Street.

**Monument Circle Brick Repair** – Repair or replacement of broken and uneven bricks on Market Street between Capitol Avenue and Alabama Street and Meridian Street between Washington Street and Ohio Street will be completed. ADA ramps and brick gutters will also be replaced, while tree grates will be repainted.

**Meridian Street from 38th Street to 86th Street** – Planned improvements include a completely new surface on Meridian Street between these intersections, curb and sidewalk work throughout and updates to the Meridian Street Bridge over the White River.

### REBUILDINDY COMMUNITY EVENTS\*

EVENT DESCRIPTION	Total
<b>Public Meetings:</b>	<b>103</b>
<i>Septic Tank Elimination Program</i>	30
<i>Sanitary Sewer</i>	15
<i>Storm Water</i>	14
<i>Transportation</i>	21
<i>Abandoned Homes</i>	23
<b>Public Forums</b>	<b>9</b>
<b>Media Events</b>	<b>17</b>
<b>Diversity Events</b>	<b>15</b>
<b>Business Events</b>	<b>8</b>
<b>Community Events</b>	<b>13</b>
<b>RebuildIndy Presentations</b>	<b>25</b>
<b>TOTAL:</b>	<b>190</b>

*\*Includes RebuildIndy events from May 11, 2010 through Oct. 21, 2011.*

### RebuildIndy Launches Map Tool

In August 2011, the City of Indianapolis launched a new RebuildIndy interactive map tool to keep Marion County residents up-to-date on project work. As progress continues on the most aggressive construction period in Indianapolis history, the City is working hard to keep the public informed about RebuildIndy projects in innovative ways.

“The new RebuildIndy interactive map tool puts project information at people’s finger tips,” said Mayor Greg Ballard. “As RebuildIndy transforms neighborhoods and enhances connectivity, this tool enables people to have a direct link as to how it will better their community.”

The new mapping tool shows all announced RebuildIndy projects, including active sanitary and storm water projects. Residents can search by address to view all projects within the defined radius or by project type. Detailed information, including estimated start dates, descriptions and target completion dates, are available for each project.

The RebuildIndy interactive map tool can be found at [www.Indy.gov/RebuildIndy](http://www.Indy.gov/RebuildIndy).







For more information, visit [www.indy.gov/DPW](http://www.indy.gov/DPW)

